Measuring the Performance and Excellence of Academicians through the e-Balanced Scorecard (e-BSC)

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Abstract

Performance measurement and management is always at the heart of any organisations wanting to be seen as transparent, efficient, effective and successful in its operation. Often times, organisations failed in realising their vision and mission as promised to their stakeholders. The most common reason being the failure in executing the strategies or simply the lack of it. University Malaya is currently looking at the balanced scorecard (BSC), introduced by Robert Kaplan and David Norton as a possible answer to this situation.

This study researches the use of BSC primarily in measuring the performance and excellence of academicians in University Malaya from the perspectives of Internal Business Process (IBP), Learning and Growth (L&G), Financial and Customer. To substantiate this research work, a survey and several interviews would be conducted. A framework would be developed as the basis of how the e-BSC for academicians would be built as the outcome of this research.

1. Introduction

It is a common belief that non-profit organisations such as public universities have not been pressured to ensure their survival for the fact that continuous funding would always be channelled to finance their operation by the government or any other public funds. However, in the face of growing competition and the pressure of accountability, universities nowadays need to establish certain performance indicators (PIs) to show to the public. Universities also need to show evidence of the attainment of their vision, mission, and strategies.

The balanced scorecard (BSC), introduced by Robert Kaplan and David Norton in 1992 is a set of measures that allow for a holistic, integrated view of business performance. Many business organizations realized that focus on a one-dimensional measure of performance (i.e. increased of profit or ability to manage cost effectively) was inadequate. While it is evident that the BSC has been widely adopted in the business sector like Telekom Malaysia Berhad, Tenaga Nasional Berhad, Petronas, Ericsson, Mobil Oil, Sears, CIGNA Property, and many others but the education sector has not fully embraced the BSC concept widely, either in Malaysia or abroad.

This early application of the BSC in the business sector enables sharing of experience and knowledge to the academic environment. The BSC has been shown as an effective tool to evaluate an organisation, and its performance. This short paper shares our preliminary research into the study of BSC adoption in measuring the performance and excellence of academicians in University Malaya from the perspectives of Internal Business Process (IBP), Learning and Growth (L&G), Customer and Financial. In higher education, there are acceptable conventions for measuring performance and excellence. Rather than emphasizing on financial performance, higher education has emphasized academic measures that are easily quantifiable. These measures (later translated as the key performance indicators) usually are built on and around such aspects as teaching and administrative loads, research/publications and other contribution to the society. The research methodology of the study would comprise of several interviews with the staff of Strategic Planning Unit of University Malaya, BSC process owners as well as the potential users of the e-BSC especially the academicians. Based on the findings, a framework would be established to form the basis for the e-BSC development.

2. Literature Review

In the higher learning setting, performance are usually judged based on the number of students, graduation rates, resources and facilities and the scholastic ranking held [9]. In addition to that, the productivity of academicians is also within the frame of evaluation, namely teaching and administrative loads, research/publications and other contribution to the society. However, one may think whether these measures actually reflect the quality of education in the institution. Such measures may be used as external performance indicators of how well the institution is doing compared to others. Clearly external indicators are targeted towards a specific audience, namely the students and parents, Ministry of Higher Education and potential sponsors. In this circumstance, the institution is only concerned with image management to maintain its reputation and influence the preferences of the target audience. Too often, institutions misunderstand that by achieving external indicators, it is successful internally. Likewise, such management style would not add well towards the achievement of long term objectives of most higher education institutions [10].

Instead, internal performance measures, which are targeted at faculty members, academic administrators and such, should be linked to the organisational goals which provide essential information towards proper resource allocation and internal policy to achieve

academic excellence. In other words, educational institutions should use appropriate measures of performance to self-improve instead of, as a means of competing with rival institutions. By viewing inwardly, and seeking to progress and develop better, the institution will naturally outperform competitors.

Even though some are concerned that the scorecard may be more suitable for profit-making organizations and not for non-profit organizations such as higher education institutions, the balanced scorecard perspectives can be customised to suit an individual organization [3][8]. Likewise, as pointed out by Kaplan and Norton [5], the financial perspective should not be the main focus of organizations as it promotes managing short term strategies instead of emphasizing on organizational missions and vision.

An effort by a private university in Taiwan adopted the balanced scorecard in attempts to respond to its financial crisis. For Chin-Min Institute of Technology (CMIT), the scorecard was introduced to revolutionise the organisation to address external threats that were jeopardizing its survival. Even though higher education institutions can be categorized as non-profit organisations, it is crucial that financial management is not ignored [8]. Ultimately, without sufficient funds the institution would not be able to achieve its long term strategies.

Like many organizations that have realised the potential of the balanced scorecard, a Management, Social Sciences and Information University in Lisbon integrated the scorecard in its decision support system for University Effectiveness and Efficiency project where a strategic information system is used in the creation and structuring of a new Master Degree in Decision Support System. Similarly, the scorecard was selected over other management methods for its strengths of being suitable for planning of strategies, recognizing initiatives to ensure strategy implementation and as a communication tool to all levels of staff. Creating a new higher degree program involves somewhat the same processes as formulating the strategies for an organization. In a similar manner, the Rossier School of Education at University of Southern California used the balanced scorecard to gauge the effectiveness of its academic program (Sutherland, 2000 cited by [10]).The targets and strategies of the new program have to be established before the degree can be offered to ensure an organization wide understanding of the goals to be accomplished in order to develop successful Master degree graduates.

Likewise, the vision of University Malaya (UM) is to be an internationally renowned institution of higher learning in research, innovation, publication and teaching. Similarly, UM's mission is to advance knowledge and learning through quality research and education for the nation and for humanity. To fully accomplish all long term strategies, a higher learning institution such as UM must adopt a performance management approach that ensures continual efforts towards this purpose. It cannot be denied that the education industry is as likely to face external pressures as any other organizations. Traditionally, higher education institutions may be protected by governments. However, with globalization, higher education institutions have to face the reality of having to continually provide and deliver excellent education.

3. Weaknesses of alternative performance measurement techniques

Common performance measurement techniques include Benchmarking, Key Performance Indicators (KPIs), Relative Value, Appraisals, Six Sigma, Total Quality Management (TQM) and so on. However, not all are applicable in the context of evaluating individual staff. For one, benchmarking involves evaluating current performance with regards to a leader in the same context. Obviously, this is appropriate in the perspective of an organization or department where best practices can be used as guidance towards excellence. On the other hand, it would be unfair for benchmarking to be used for staff evaluation because people vary in the way they work and in how they would like to improve. By forcing staffs to follow the best practices of a "champion" is to limit creativity and indirectly endorsing conformity. Meanwhile, KPIs are useful when used concurrently with other performance measurement techniques such as the balanced scorecard. By itself, the tool only provides financial and non-financial metrics that indicates the rate of achievement relative to set objectives.

At the same time, Relative Value only determines the subjective value of an asset to an organization. The evaluation of an individual requires more objective measures to gauge performance. Appraisal on the other hand, is one of the most common forms of staff performance measurement technique. However, it has been criticized for its somewhat bureaucratic nature that endorses conformity due to its structured nature [11]. Instead of promoting creativity, appraisals force staffs to focus efforts on adapting and contributing only to measured areas that will guarantee rewards. As remarked by [13], a structured and static performance measurement may limit the organization's potential to address the constantly changing environment. Clearly, such a performance measurement would only be suitable in a static environment where tasks are somewhat repetitive and staffs are unlikely to deviate from their responsibilities. In such environments, staffs are likely to increase efficiency but work effectiveness is improbable to happen, as rewards are gained by the quantity produced rather than the quality maintained. Meanwhile, Six Sigma is another performance measurement tool that emphasizes on quality improvement. Nevertheless, this tool has been disapproved for its somewhat focus on scientific tools such as statistical techniques, Failure Modes and

Effect Analysis [12]. Yet again, staff evaluation requires a more holistic approach and cannot completely rely on scientific assessment. Lastly, TQM is another management strategy that stresses on the awareness of quality to fulfill customer requirements. This however, has been highlighted as one of its weaknesses for highlighting specifically on one aspect and neglecting other factors that constitute success [14].

However, completely not utilizing any form of performance measurement is equally impractical. Any task requires focus and direction for it to be accomplished well. Therefore, targets must be set to fortify decision making at every level of the organization let alone boost expected outcomes. The Balanced Scorecard endorses such efforts in addition to improving communication to key stakeholders with regards to the expected outcomes. Moreover its cyclical nature promotes cause and effect relationships to feedback on improvements in areas of under performance by placing the responsibility on individuals for their own development.

4. e-Balanced Scorecard (e-BSC) for University Malaya

Since the inception of the BSC, there have been numerous scorecard software packages available in the market. Among them are Oracle Balanced Scorecard, SEM Balanced Scorecard, SPImpact Balanced Scorecard, Balanced Scorecard Analytic Application, IFS Scorecard, Enterprise Scorecard, QPR ScoreCard and so on. The existence of such software packages has shown there is justification for an automated balanced scorecard to further enhance the benefit of the performance measurement tool. It is undeniable that automation itself allows better time management and encourages users to focus on task effectiveness rather than the process of doing the job. In other words, it is easier to focus ones' attention on the rationale of doing something. Similarly, automation is a requirement for effective decision making as timeliness of crucial information available at the right time is important (de Waal, 2001 cited by [7]). Likewise, automating the BSC is beneficial. As emphasized by Assiri *et al.* [1], the implementation of an automated balanced scorecard would stimulate faster adoption of the performance measurement tool and enable speedy organizational culture change while expediting organization-wide participation.

The result of the collaboration between the University at Albany, State University of New York and Pepperdine University in 2004, showed that organizations using in-house developed scorecarding systems experienced exceptionally more benefits compared to organizations that do not. Indeed some may argue that common spreadsheet software such as Microsoft Office's Excel can completely fulfil the requirements to automate a balanced scorecard. However, there are several benefits that standard spreadsheet software cannot offer unlike specialised scorecard systems can. Specialised software tends to be developed with better security features besides the fact that it is a more focused tool. Marr and Neely (2001 cited by [7]) highlighted several disadvantages of adopting a standard spreadsheet software as having little or no scalability, cumbersome to update as data is manually entered and updated, no support for collaboration and the difficulty that comes with analysing the spreadsheets that are mostly separated and stored in disconnected workstations. This especially does not fit well with the purpose of the balanced scorecard to ensure organization-wide alignment with the long-term strategies.

On the other hand, some organizations choose to use the conventional paper-based system, however it is an unquestionable fact that this method is unreliable and troublesome. Furthermore, if an organization intends to use the balanced scorecard as its main performance measurement systems, automation would be a necessity (Classe, 1999 cited by [7]).

This study will entail the analysis, design and development of an e-BSC customised for the performance measurement of academicians in University Malaya. Available balanced scorecard packages would be studied in order to learn the best practices or features being offered, the aesthetics of user interface design and eventually develop a better e-BSC system for UM deployment.

5. Methodology

The research methodology is through primary and secondary data collections including questionnaires, surveys and interviews and information from publications such as reports, journals, e-libraries, corporate websites and trade magazines. The questionnaires, survey and interviews will be used to determine issues that have been identified through secondary study of existing literatures and it can be hypothesized that:

i. BSC is still in its early stage of implementation in many education institutions in Malaysia;
ii. By having the e-BSC, the academicians would be able to manage their performance contracting (early of year), tracking (middle of year) and evaluation (end of year); and
iii. By having the e-BSC, the academicians are able to improve their performance to ensure excellence is achievable, well defined and no longer just a moving target.

The demographics to be studied will mainly focus on the population of academicians in UM, besides staff of Strategic Planning Unit as well as the potential process owners. The issues to be highlighted in the questionnaires, survey and interviews consist of the following:

i. Academicians' comfort with the present performance measurement system. This will entail investigations on both positive and negative feedbacks from participants.
ii. Teaching complexities and responsibilities of academicians and how fairly they are rewarded.
iii. Mode of report delivery. The current form of delivering reports is important to gauge the present culture practised in the institution of the extent of technology used.
iv. Suggestions from academicians for a better performance measurement system.
v. Level of interest of academicians on the development of e-BSC to measure their performance and excellence

Findings from the requirement analysis and data collection will be later transferred into statistical analysis for further analytical work. In addition, a review of current performance measurement documents and system will be carried out to perform a critical anaylsis of current measures used. This is followed by the development of the e-BSC system using Object-Oriented (OO) approach and prototyping. However, prior to the actual development of e-BSC, a framework and system architecture would be built for the e-BSC in order to ensure correct understanding of the overall requirements are well captured, defined and developed.

A series of tests would be conducted to verify the findings of the research and put the prototype of e-BSC to pilot deployment before the actual roll out is performed. Testing would include module testing and the functioning of the overall e-BSC system after integration. This is followed by the evaluation of the system. To validate the outcomes of testing procedures and evaluate the effectiveness of the system, real data collected from at least 2 faculties in UM will be used. On the other hand, to measure the performance of the system as well as to expose and gauge feedback from the academicians of UM with regards to the look, feel and functionality of the system, tests will be conducted with some selected samples from other faculties.

6. Research Methods

The study will undertake action research, in a cyclical manner. This is to enable understanding of how improvement can happen with regards to organizational and individual change. The following shows the five steps that will be performed:

i. Diagnosing – The current issues and nature of problems at both organizational level and individual level with regards to performance measurement will be identified and analysed to understand the current culture. This is followed by the development of hypotheses regarding the current practice in performance measurement and its problem domain.
ii. Action Planning – Actions that will improve the current practice of performance measurement and promote individual performance through the use of the e-BSC will be drawn out. The development of the e-BSC will be based on the framework and the system architecture built. This allows the establishment for change and the appropriate steps and measures to be taken for change towards an improved performance measurement culture.
iii. Action Taking – The alignment of e-BSC with organizational strategies will be introduced at the individual level. All members of the research team will be actively involved in the deployment.
iv. Evaluation – The results of the actions taken will be evaluated to verify if positive benefits are accomplished and that the expected improvements are realised. Where there is improvement, the evaluation will entail queries of whether the actions taken, actually produced the desired results. On the other hand, where otherwise, alternative steps and actions will be taken in the next iteration of the action research, to repel any further problems.
v. Specifying Learning – The process of learning will be a continuous effort throughout all the steps in the research, even though its formal specification will only take place last. The knowledge gained from the research can be used to establish a new and improved organizational culture. All results, whether positive or negative, and knowledge gained from the research would establish a beneficial contribution for future research.

7. Implications and Conclusion

This study contributes to a better understanding of positive impacts relative to the embracement of the BSC into the environment of higher learning education. A focus on performance measurement would raise the encouragement among academicians to deliver their performance promises and accountability for under performance. It draws the attention of institutions towards its performance achievement in order to gain confidence and satisfaction from internal and external customers. This study highlights the significance in aligning academicians' responsibilities and commitment with the institution's vision and mission.

The balanced scorecard holds so much promise as an effective tool to evaluate an organisation, and measure its performance. This is especially taken from the experience of private sectors that already have BSC in place for many years now. The literatures have also shown many successful and effective implementation of BSC in non-profit organisations. The development of a full-fledged BSC coupled with a computerised system such as e-BSC is deemed appropriate for University Malaya to undertake in giving the university and its academicians more focus on internal processes to improve institutional effectiveness, and demonstrate its accountability to the government and the community.

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